Syncrolift® shiplift and transfer systems

Increasing operating efficiency by reducing dry-docking times
World leader in shiplift technology

Big or small, a Syncrolift® will lift and transfer them all

Rolls-Royce Syncrolift® technology has been used in over two million dry dockings worldwide for vessels large and small. The modern synchronized AC drive systems and PLC controls are continually refined and updated to ensure today’s systems reflect the world’s most advanced shiplifting system and modern technology providing faster, safer, more profitable and most versatile method of dry docking.

Each and every installation is designed to Rolls-Royce standards and those set down by regulating agencies such as Lloyd’s Register of Shipping. Our experienced Naval Architects are able to interpret the docking requirements for any type of vessel in its dry-docking condition to ensure total customer satisfaction on project completion.

Pictured above: The Indian Navy’s 175m x 28m system at Karwah has a 14,875t net lift capacity (top), Song Thu – Vietnam: 60m x 18m with 1,650t capacity (middle), Marina 92 – Barcelona: 61m x 14.5m with 2,342t capacity (bottom)

The 188m x 33.8m Syncrolift® at Malaysia Shipyard and Engineering’s yard in Jahor has a 23,320t maximum net lifting capacity.
Articulated platform – safeguards the ships hull

The patented articulated platform, an integral part of each Syncrolift® mechanically supports a ship in a manner similar to that provided by buoyancy when it is afloat, and ensures the load is determinately distributed to the respective hoists. While not evident to the eye during operation, the articulation minimizes peak loads on the hull structure and enables the Dockmaster to accurately monitor and control the loads being applied to the ship’s hull during docking.

Synchronized hoists
– constant speed regardless of load

Shiplift lifting capacity is primarily dependent on the number of hoists used. To operate safely, all lifting points must be perfectly synchronized. Our Syncrolift® hoists are refined electrical machines driven by AC induction motors. This means that every hoist in a system operates at the specified speed regardless of the individual loads on each hoist, behaving as if they were all mechanically coupled together. Syncrolift® hoists are available with a wide range of lifting capabilities, lifting speeds and vertical travel to suit individual customer needs.

Wire ropes – safe and reliable operation

To maintain the synchronous nature of our design, the Syncrolift® platform must move vertically in one plane at a controlled, continuous speed with no need for adjustment. The only medium to offer this finite control is wire ropes. Our wire ropes are designed and engineered for high strength with a long service life in the marine environment.

ATLAS Dockmaster® control system
– operating ease

Simple to operate with pushbutton controls, the patented Syncrolift® ATLAS Dockmaster® load measuring system provides vital data on the vessel being docked. Principally, it displays and records the weight distribution on the platform and total displacement. Other readings determine the load distribution profile of the vessel and its longitudinal and transverse centres of gravity. ATLAS Dockmaster® shows also how the vessel is sitting on its blocks and functions as a condition monitor for all major components within the system.
Transfer systems – maximise your investment
A Syncrolift® transfer system can multiply the dry docking capacity of a single shiplift many times and minimizes space requirements at the waterfront. As each shipyard has its own unique environment and operating requirements, Rolls-Royce will select the system that maximizes the earning potential for the facility and provide a cost-effective turnkey shiplift and transfer solution.

Through-life support
Maintenance programmes are an integral part of the dedicated Rolls-Royce service. We can provide everything from maintenance manuals and record keeping to on-site maintenance teams, responsible for all aspects of support. Customers can select from services that range from Dockmaster training and scheduled regular inspection programs, to genuine spares provision and control system upgrades. All are designed to match individual customer requirements, and ensure system reliability and safe, continuous operation. Effective maintenance is pivotal to safe Syncrolift® operation.
There are many reasons why over 230 customers in 69 countries have chosen Syncrolift® shiplifts and transfer systems from Rolls-Royce for their shipyards. One is our extensive experience that has been built up over 50 years, custom engineering Syncrolift® to exactly match each customer’s requirement - we understand that every customer’s docking needs are unique. Another is the quality of our Syncrolifts and transfer systems, each providing reliable dockings day after day, with decades of unbroken service.

For most customers this has led to the creation of multiple work berths away from the water allowing the most efficient use of prime dockyard space. One customer carries out more than 2,000 dry-docking contracts each year with one Syncrolift®, while many others routinely carry out six to ten docking operations daily. The result is that ships are docked and returned to service much quicker when compared with graving or floating docks.

Rolls-Royce is totally dedicated to designing and supplying systems that are the world’s most advanced by using proven components that are constantly refined with state-of-the-art technology. This enables us to provide safer, more reliable and flexible methods of dry docking. We pride ourselves in being the world leader in shiplift system technology with the broadest engineering capability, able to cost effectively lift and transfer vessels of just 100 tonnes up to 100,000 tonnes.

- Over 230 Syncrolift® system designs in 69 countries
- Capable of handling vessels of 100 to 100,000 dwt
- Modular design - simple upgrading to suit changing docking needs
- Multiple vessel dry-berthing with a single Syncrolift®

Syncrolift® marine elevators can reduce dry-docking times by up to 50 percent.
Syncrolift®…increasing efficiency and reducing dry-docking times around the world.